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## United States Department of Agriculture,

BUREAU OF PLANT INDUSTRY,

Plant Life History Investigations,

WASHINGTON, D. C.

THE SAVAGE CITRANGE.<sup>1</sup>

One of the best citranges in size, shape, and appearance which have been secured in the course of the Department's experiments is hybrid No. 779, a cross of Trifoliate orange with pollen of sweet orange, and a sister seedling of the Willits, Morton, Colman, and Rustic. This hybrid

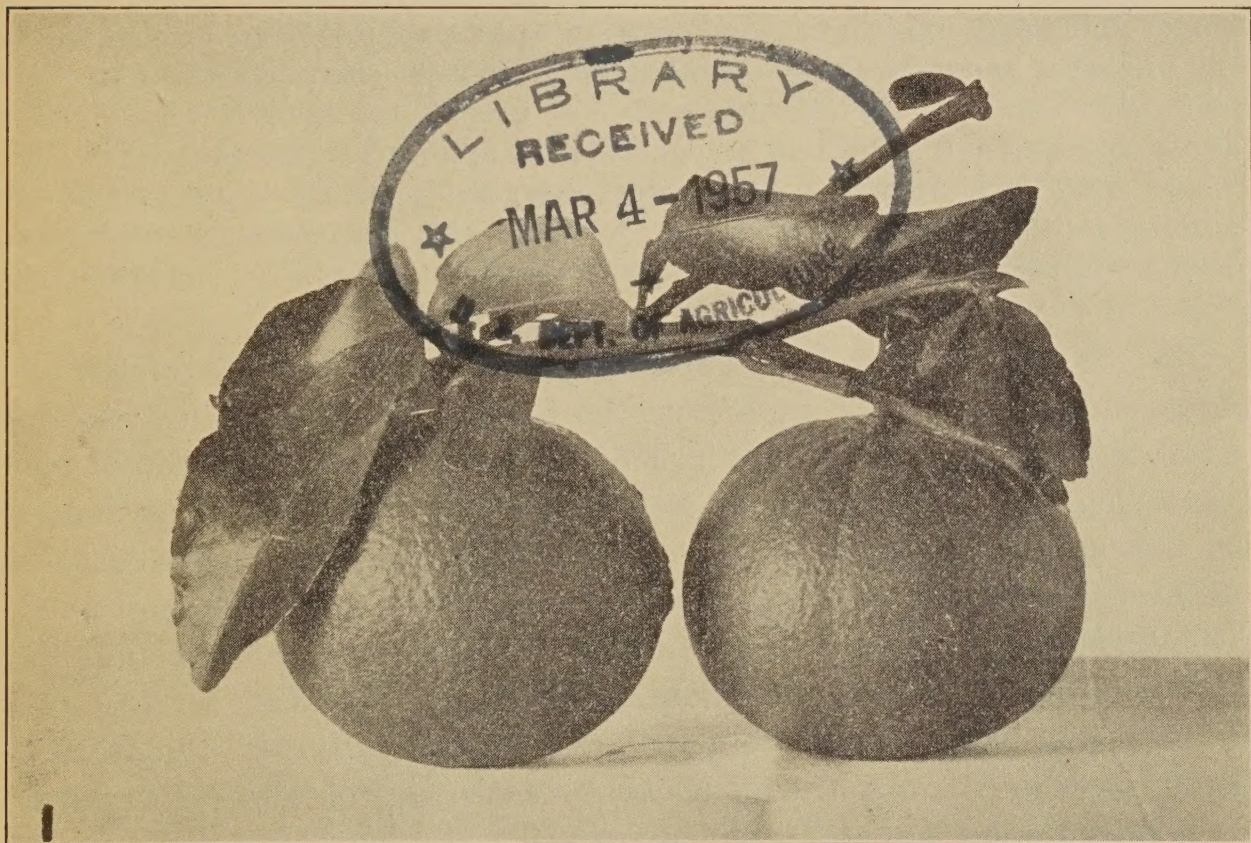


FIG. 1.—Branch of the Savage citrange. (One-half natural size.)

has been named the *Savage*, after Mr. Frank Savage, of Eustis, Fla., in whose orange grove many of the Department's hybridization experiments were started. The Savage produces a large, usually well-shaped fruit (fig. 1) and is apparently a valuable variety, differing considerably from any of the other citrange varieties.

<sup>1</sup> Reprinted, with slight changes, from "New Citrus and Pineapple Productions of the Department of Agriculture," by Herbert J. Webber, Yearbook, 1906, pp. 333-334, where a colored plate is also given.



Following is a technical description of the variety:

DESCRIPTION OF FRUIT AND TREE.—Fruit spherical or slightly compressed spherical, frequently slightly oblique; of medium size, from 2 to 2½ inches in height and from 2¼ to 3¼ inches in diameter; weight from 3 to 8 ounces, average about 6 ounces, considerably lighter than water, being less dense than the Colman; color light orange yellow (by Ridgway's standards between saffron yellow and Indian yellow), thus being almost the same color as Colman and lighter than the Willits and Morton; surface in some fruits smooth, in others considerably roughened by depressions; many fruits have very pronounced furrows, running from the base to the apex, while others show only slight furrows or none; with a few hairs on rind, but these very small and invisible without lens; calyx persistent but inconspicuous as in ordinary orange; rind of medium thickness, one-eighth to three-sixteenths of an inch, adhering rather closely to fruit, suggests orange in taste, but with considerable bitterness from the Trifoliata parent; oil glands spherical or ovate, similar in shape and appearance to those of ordinary orange and being different in shape and more numerous than those of Colman; pulp tender, translucent, light yellow (by Ridgway's standards between wax yellow and Naples yellow); pulp vesicles fusiform, varying in size, smaller than in ordinary orange but much larger than in Trifoliata; segments 8 to 10; separating membranes moderately tender, slightly bitter, texture tender and juicy; axis small, one-fourth to five-sixteenths of an inch in diameter; flavor a sprightly acid, somewhat bitter, not so sour and bitter as Colman, more similar to the Morton; seeds few, usually averaging 3 or 4 per fruit; aroma pleasant but light, has a suggestion of apple odor; tree similar to Trifoliata, very vigorous and prolific; hardy, evergreen or semi-evergreen; without pruning grows rather tall and slender; foliage dense; leaves mainly trifoliolate, some unifoliolate, large; season of maturity medium early, from September 15 to last of November.

The Savage citrange is apparently the most fruitful of all of the citrange clons, or varieties, aside from the Rusk. The trees in the Government test grove were last year (1906) laden with a very full crop of nice appearing fruit, hanging on the tree in bunches. The fruit runs uneven in size and shows some tendency toward freakishness, a few cases of protruded segments having been observed. From the fewness of these among the comparatively large number of fruits developed it is believed that it is not a seriously detrimental character. The fruit is not quite so sour and bitter as the Colman, being more nearly like the Morton. By those who like a sour fruit it can be eaten out of hand with sugar. It makes a good ade and a fair marmalade and can doubtless be used in many places where limes and lemons are now used.

The tree has dense, dark green foliage and will make a fine appearing lawn tree. It may make a good hedge plant when pruned, but pruning on top would probably be necessary, as the test trees do not seem to develop many basal branches. The Savage is one of the most vigorous growers of any of the Trifoliata × orange hybrids, and, as it produces a considerable number of seeds, it is worthy of careful trial as a hardy stock on which to bud the varieties of the ordinary sweet orange. The Trifoliolate orange is used extensively at the present time, but many orange growers object to it, owing to its tendency to dwarf the trees.



The Savage, being much more closely related to the sweet orange, an exceptionally vigorous grower, and wholly resistant to any degree of cold which would affect the sweet orange, would seem to possess all of the desirable qualities of the Trifoliata as a stock and would probably not have the same dwarfing tendencies. It might be supposed that, being a hybrid, the seedlings would be too variable to permit of using them in this way. While the variability of the seedlings of the various citrange clons has not been fully determined, a number of seedlings have been grown, and the foliage characters of these are in all cases remarkably like those of the parent variety, showing no reversions to the pure Trifoliata or pure orange, as might be expected. While the value of the Savage as a stock is entirely problematical, it is sufficiently promising for the writer to recommend its thorough trial.

Approved:

B. T. GALLOWAY,  
*Chief of Bureau.*

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